

### **REMARKS**

Claims 16-30 and 70-75 were previously pending of which, claim 16 was previously presented, claim 70 has been amended, and claims 17-30 and 71-75 remain in their original form. Reconsideration of presently pending claims 16-30 and 70-75 is respectfully requested in light of the above amendments and the following remarks.

### **Objections**

The abstract of the present application was objected to because it did not commence on a separate sheet. However, MPEP §1893.03(e) provides that “the requirement of 37 CFR 1.52(b) that the abstract ‘commence on a separate physical sheet or electronic page’ does not apply to the copy of the application (pamphlet) communicated to the designated Offices by the International Bureau under PCT Article 20.” Here, the present application was filed under 35 U.S.C. §371 for national stage entry of international application PCT/US00/27352. Therefore, the objection to the abstract should be withdrawn.

Claims 16-30 and 70-75 were objected to because of informalities. The listing of claims beginning on page 2 of the present paper includes the status of each claim and appropriate markings, when necessary, for changes in the claim. Therefore, the objection to claims 16-30 and 70-75 should be withdrawn.

### **Rejections Under 35 U.S.C. §103**

#### **Claim 16**

Claim 16 recites:

16. A method of providing secure communication between a mobile node and home domain using a foreign domain, comprising:  
transmitting a registration request from the mobile node to the home domain the request comprising an identity of a user of the mobile

node in encrypted form and network routing information in non-encrypted form;

the home domain receiving and processing the registration request to generate a registration reply comprising one or more encryption keys for encrypting messages communicated between and among the mobile node, home domain, and the foreign domain; and

transmitting the registration reply from the home domain to the foreign domain and the mobile node.

Claim 16 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Inoue et al. (US Patent No. 6,501,767 hereinafter referred to as “Inoue”) in further view of Tisdale et al. (US Patent No. 5,708,716 hereinafter referred to as “Tisdale”). Applicant respectfully traverses this rejection on the grounds that the references are defective in establishing a *prima facie* case of obviousness with respect to claim 16.

As the PTO recognizes in MPEP §2142:

*The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the Examiner does not produce a prima facie case, the Applicant is under no obligation to submit evidence of nonobviousness...*

It is submitted that, in the present case, the Examiner has not factually supported a *prima facie* case of obviousness for the following mutually exclusive reasons.

**1. Even when combined, the references do not teach the claimed subject matter**

As provided in 35 U.S.C. §103:

*A patent may not be obtained...if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains...(Emphasis added)*

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, neither Inoue nor Tisdale disclose “the home domain receiving and processing the registration request to generate a registration reply comprising one or more encryption keys for encrypting messages communicated between and among the mobile node, home domain, and the foreign domain.”

As indicated by the Examiner, Inoue does not disclose a registration reply “comprising one or more encryption keys for encrypting messages to be communicated between and among the mobile node[,] home [domain, and the foreign domain].” Applicant submits that Tisdale fails to cure this deficiency. The Examiner alleges that this feature is disclosed in Col. 7, line 63 through Col. 8, line 3 of Tisdale, which reads as follows:

It is another feature and advantage of the satellite communication system to provide a fraud detection and user validation system where keys are not transmitted “over the air” in the clear. It is another feature and advantage of the satellite communication system to provide a fraud detection and user validation system where the keys are changeable at the MET, and a simple on-time entry/validation system.

As noted above, Tisdale describes generally a fraud detection and user validation system that utilizes security keys. Tisdale further describes a first security key generated in a central controller and a second security key generated in a mobile communication system so that the **central controller can verify, by comparing the first and second security keys**, that the mobile communication system is authorized to use the communication system. (See Tisdale, Col. 11, lines 11-35). Here, the home domain has already authenticated or verified the user of the mobile node by processing the registration request. Accordingly, the encryption keys are for encrypting messages communicated between and among the mobile node, home domain, and the foreign domain. Thus, Tisdale does not disclose generating a registration reply “comprising one or more encryption keys for encrypting messages communicated between and among the mobile node, home domain, and the foreign domain,” as is recited in claim 16.

Consequently, it is impossible to render obvious the subject matter of claim 16, as a whole, and the explicit terms of §103 cannot be met. Thus, for this mutually exclusive reason,

the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 16, and the rejection of claim 16 under 35 U.S.C. §103 should be withdrawn.

**2. Prior art that teaches away from the claims cannot be used to establish obviousness**

In the present case, the Tisdale patent teaches generating security keys from different locations, one in the central controller and the other in the mobile communication system. (See Tisdale, Col. 11, lines 11-35). Furthermore, the security keys are for the central controller to verify whether the mobile communication system is authorized to use the communication system. (See Tisdale, Col. 11, lines 11-35). Here, the **home domain** receives and processes the registration request "to generate a registration reply comprising one or more **encryption keys** for encrypting messages communicated between and among the mobile node, home domain, and the foreign domain." Accordingly, the encryption keys are generated and distributed from a central location, the home domain. Moreover, the encryption keys are for encrypting messages communicated between and among the mobile node, home domain, and the foreign domain. The home domain has already authenticated the user of the mobile node by processing the registration request from the mobile node. Thus, Tisdale clearly teaches away from claim 16, as recited above.

Since it is well recognized that teaching away from the claimed invention is a *per se* demonstration of lack of *prima facie* case of obviousness, it is clear that the Examiner has not borne the initial burden of factually supporting any *prima facie* conclusion of obviousness with respect to claim 16.

Thus, for this reason alone, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 16, and the rejection of claim 16 under 35 U.S.C. §103 should be withdrawn.

Claim 70

Claim 70 as amended recites:

70. A method of providing secure communication between an initiator and a responder in a communications network, comprising:  
dynamically establishing a security association between the initiator and the responder, whereby the initiator presents to the responder a registration request that includes one or more proposals.

Claim 70 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chuah et al. (US Patent No. 6,400,722 hereinafter referred to as “Chuah”) in further view of Cheng et al. (US Patent No. 6,418,130 hereinafter referred to as “Cheng”). Applicant respectfully traverses this rejection on the grounds that the references are defective in establishing a *prima facie* case of obviousness with respect to amended claim 70. Claim 70 has been amended to better clarify the present disclosure.

As the PTO recognizes in MPEP §2142:

*The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the Examiner does not produce a prima facie case, the Applicant is under no obligation to submit evidence of nonobviousness...*

It is submitted that, in the present case, the Examiner has not factually supported a *prima facie* case of obviousness for the following mutually exclusive reasons.

**1. Even when combined, the references do not teach the claimed subject matter**

As provided in 35 U.S.C. §103:

*A patent may not be obtained...if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains...(Emphasis added)*

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, neither Chuah nor Cheng disclose “dynamically establishing a security association between the initiator and the responder, whereby the initiator presents to the responder a registration request that includes one or more proposals,” as is recited in amended claim 70.

As indicated by the Examiner, Chuah does not disclose “dynamically establishing a security association between the initiator and the responder.” Applicant submits that Cheng fails to cure this deficiency. The Examiner alleges that this feature is disclosed in Col. 7, lines 9-17 of Cheng, which reads as follows:

It is an object of the present invention to provide a technique which improves the performance of a mobile unit (MU) in a wireless LAN or mobile IP environment, particularly during hand-over. The present invention accomplishes this by reusing rather than renegotiating the security associations (SAs) corresponding to the MU one the MU is handed-over. By reusing the SAs, less time is spent negotiating SAs. Consequently, a MU can begin secure communications almost immediately upon being handed-over from one SU to another SU.

As noted above, Chen describes generally a method to **reuse already negotiated** security associations between a mobile unit and a stationary unit when the mobile unit is handed-over to another stationary unit. Here, the initiator presents to the responder a registration request that includes one or more proposals. In this manner, the initiator may engage in a negotiation with the responder in which the entities **dynamically negotiate** the security association between each other. Accordingly, the security association between the initiator and responder is dynamically established. (See Present Application, pg. 25, lines 6-14).

In view of the above, neither Chuah nor Cheng teaches “dynamically establishing a security association between the initiator and the responder, whereby the initiator presents to the responder a registration request that includes one or more proposals.” Consequently, it is impossible to render obvious the subject matter of claim 70, as a whole, and the explicit terms of §103 cannot be met. Thus, for this mutually exclusive reason, the Examiner’s burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to

claim 70, and the rejection of claim 70 under 35 U.S.C. §103 should be withdrawn.

**2. The combination of references is improper**

There is still another mutually exclusive and compelling reason why Chuah and Cheng cannot be applied to reject claim 70 under 35 U.S.C. §103. The MPEP provides in §2142 that:

*...the Examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made.... The Examiner must put aside knowledge of the Applicant's disclosure, refrain from using hindsight, and consider the subject matter claimed 'as a whole.'*

Here, neither Chuah nor Cheng teaches, or even suggests, the desirability of the combination since neither teaches “dynamically establishing a security association between the initiator and the responder, whereby the initiator presents to the responder a registration request that includes one or more proposals.”

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103 rejection of claim 70.

In this context, the MPEP further provides at §2143,01:

*The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination.*

In the above context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting combination, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's combination arises solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 70. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to

claim 70, and the rejection of claim 70 under 35 U.S.C. §103 should be withdrawn.

Dependent Claims

Claims 17-30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Inoue in further view of Tisdale. Claims 17-30 depend from, either directly or indirectly, and further limit independent claim 16 and are allowable for at least the same reasons as set forth above for claim 16. Therefore, the rejection of claims 17-30 under 35 U.S.C. §103 should be withdrawn.

Claims 71-75 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chuah in further view of Cheng. Claims 71-75 depend from, either directly or indirectly, and further limit independent claim 70 and are allowable for at least the same reasons as set forth above for claim 70. Therefore, the rejection of claims 71-75 under 35 U.S.C. §103 should be withdrawn.



**Conclusion**

It is clear from all of the foregoing that independent claims 16 and 70 are in condition for allowance. Dependent claims 17-30 and 71-75 depend from, either directly or indirectly, and further limit independent claims 16 and 70 and therefore are allowable as well.

An early formal notice of allowance of claims 16-30 and 70-75 is requested. The Examiner is invited to call the undersigned at the below-listed number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,



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